

SAFETY DATA SHEET

Date Updated: 01.06.2013
Version: EU 4.6
Regulation REACH (EC 1907/2006) & CLP (EC 1272/2008)

ORGANOSILANE IBEO

**** SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/ UNDERTAKING ****

MSDS Name: **Organosilane IBEO**
Chemical Name: iso-Butyltriethoxysilane, 99%min
Synonym: Triethoxy(isobutyl)silane
IUPAC Name: triethoxy(2-methylpropyl)silane
Company Identification: Dalian Onichem Co., Ltd.
No. 2 Gaoxin Street, Qixianling, Dalian 116023, P.R. China
Tel: 86-411-84794022, Fax: 86-411-84794077
For emergencies, call CHEMTREC 1-800-424-9300 or 1-202-483-7616

**** SECTION 2 - HAZARDS IDENTIFICATION ****

EU-GHS Classifications

Classifications below according to Regulation (EU) No 1272/2008 on classification, labelling and packaging of Substances and Mixtures (CLP).

Skin irritation Category 2 H315

GHS-Labeling:

Globally Harmonized System of Classification and Labelling (GHS)
Symbol(s):



Hazard Pictogram: GHS07
Signal Word: Warning

Hazard Statement:	H315	Causes skin irritation.
Precautionary Statement:	P264 P280 P302+P352 P332+P313 P362	Wash hands thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. IF ON SKIN: Wash with soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

**** SECTION 3 - HAZARDS IDENTIFICATION ****

Ingredient (Chemical Name)	CAS#	EC#	Symbol(s)	R-phrase(s)	Hazard statements
iso-Butyltriethoxysilane, 99%min.	17980-47-1	402-810-3	Xi	R38	H315

**** SECTION 4 - FIRST AID MEASURES ****

General information: Take persons to a safe place. Observe self-protection for first aid. Before seeking medical attention remove contaminated clothing and shoes. Take a copy of the Safety Data Sheet when going for medical treatment.

Eyes: Immediately rinse thoroughly for at least 15 minutes using plenty of water, also under the eyelids. Consult an ophthalmologist in case of persistent discomfort.

Skin: Wash off promptly with plenty of water. Wash contaminated clothing before reuse. If symptoms persist, consult a physician for treatment.

Ingestion: If conscious, have the mouth rinsed with water, then drink plenty of water in small sips. Consult a physician immediately.

Inhalation: Remove from exposure to fresh air immediately. If symptoms persist, consult a physician for treatment.

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Indication of any immediate medical attention and special treatment needed:

If required, therapy of irritative effect. After absorbing large amounts of substances: administration of activated charcoal. Acceleration of gastrointestinal passage

**** SECTION 5 - FIRE FIGHTING MEASURES ****

General Information: Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan.

Suitable extinguishing Media: Use Alcohol-resistant foam, dry chemical, or carbon dioxide.

Further information: Do not direct a solid stream of water or foam into hot, burning pools: this may cause frothing and increase fire intensity. Cool closed containers exposed to fire with water spray.

Unusual Fire and Explosion Hazards: Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

Flash Point: 62 °C (144°F)

Auto-ignition Temperature: N/A.

Explosion Limits, Lower: 0.39%(V)

Upper: 8.47%(V)

NFPA: N/A.

Advice for firefighters: Water used to extinguish fire should not enter drainage systems, soil or stretches of water. Ensure there are sufficient retaining facilities for water used to extinguish fire. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulation

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

General Information: Use proper personal protective equipment as indicated in Section 8. Keep out unprotected persons, ensure adequate ventilation.

Spills/Leaks: Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container, to be disposed of in compliance with existing regulations.

Environmental precautions: Do not flush into surface water, sanitary sewer system

**** SECTION 7 - HANDLING and STORAGE ****

Handling: Provide good ventilation or extraction. Keep away from heat and sources of ignition. Take precautionary measures against static charges.

Storage: Keep containers tightly closed in a cool, dry, well-ventilated place. Protect from moisture

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protective Equipment (PPE)

Eyes: Wear chemical goggles.

Skin: Wear appropriate protective gloves and clothing to prevent skin exposure.

Clothing: Wear appropriate protective clothing to minimize contact with skin.

Respirators: Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

Hygiene measures: When using, do not eat, drink or smoke. Wash face and/or hands before break and end of work. Remove contaminated or saturated clothing. Wash contaminated clothing before re-use.

Protective measures: Handle in accordance with good industrial hygiene and safety practices. If workplace exposure limits are exceeded and/or larger amounts are released (leakage, spilling, dust) the indicated respiratory protection should be used. If there is the possibility of skin/eye contact, the indicated hand/eye/body protection should be used. Do not breathe in vapors or aerosols. Avoid contact with skin and eyes

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Appearance: Colorless and transparent liquid

Odor: Characteristic

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pH: N/A.

Vapor Pressure: 33 Pa @ 20°C

Vapor Density (air=1): N/A.

Evaporation Rate (butyl acetate =1): N/A.

Viscosity: N/A.

BP/BP Range: 190 °C

Freezing/Melting Point: < -65 °C

Decomposition Temperature: N/A.

Solubility: Not miscible, decomposition by hydrolysis.

Specific Gravity: 0.880 g/cm³ @ 25 °C

Molecular Formula: C₁₀H₂₄O₃Si

Molecular Weight: 220.39

**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Avoid contact with humid air and water.

Materials to Avoid: Strong oxidizing agents.

Hazardous Decomposition Products: Ethanol in case of hydrolysis. Oxides of silicon, Carbon monoxide, Carbon dioxide under high temperature condition.

Hazardous Polymerization: Will not occur

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

Acute oral toxicity: LD₅₀ Rat: >5,000mg/kg

Acute dermal toxicity: LD₅₀ Rat: >2,000mg/kg

Acute inhalation toxicity: LC₅₀ Rat: 5.88 mg/l/4h/Aerosol

Skin irritation: Rabbit, irritating.

Eye irritation: Rabbit, not irritating

**** SECTION 12 - ECOLOGICAL INFORMATION ****

Biodegradability: Exposure time: 28 d 75% Readily biodegradable.

Bioaccumulation: Not bioaccumulative.

Toxicity to fish: LC₅₀ Oncorhynchus mykiss 85 mg/l/96 h

Toxicity to daphnia: EC₅₀ Daphnia magna: >49.1 mg/l/48 h

Toxicity to algae: NOEC scenedesmus subspicatus: ≥36 mg/l/72 h

**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

Dispose of in a manner consistent with federal, state, and local regulations.

Do not reuse empty containers and dispose of in accordance with the regulation issued by the appropriate local authorities. If there is product residue in the emptied container, follow directions for handling on the container's label

Incorrect disposal or reuse of this container is illegal and can be dangerous

No waste key number as per the European Waste Typed List can be assigned to this product, since such classification is based on (as yet undetermined) use to which the product is put by the consumer.

The waste key number must be determined as per the European Waste Types List(EU Waste Types List 2000/532/EC) in cooperation with the disposal firm, producing firm or authority

**** SECTION 14 - TRANSPORT INFORMATION ****

This product is not regulated as dangerous goods by IMDG, ADR/RID, IATA/ICAO.

For USA ONLY: In packaging exceeding 450L, this product must be classified, placarded, marked and shipped as Combustible Liquid to the USA

**** SECTION 15 - REGULATORY INFORMATION ****

European/International Regulations

European Labeling in Accordance with EC Directives

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Statutory basis/list: According to Directive 67/548/EEC or 1999/45/EC

Hazard Symbols:	Xi	Irritant.
Risk Phrases:	R38	Irritating to skin.
Safety Phrases:	S24	Avoid contact with skin.

Other international regulations:

Listed on or in accordance with the following inventories

AICS –Listed/registered

EINECS - Not listed/Not registered

ELINCS - Listed/registered

ENCS - Listed/registered

IECSC - Listed/registered

KECL - Listed/registered

DSL - Listed/registered

PICCS - Listed/registered

TSCA - Listed/registered

**** SECTION 16 - ADDITIONAL INFORMATION ****

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if we have been advised of the possibility of such damages